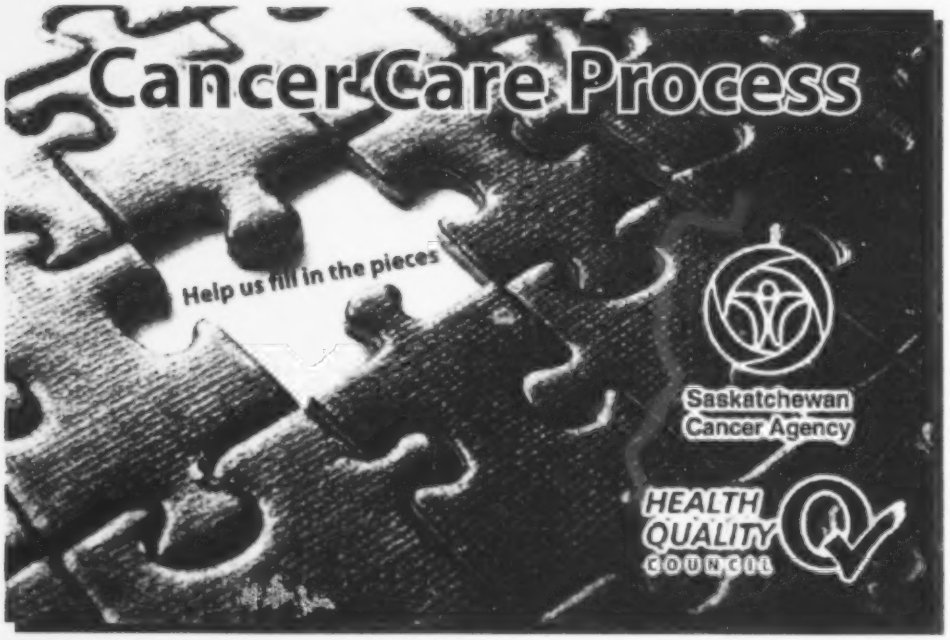

Report on Cancer Care Consultations

June 2005

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Introduction

This report captures work done by participants at the Cancer Consultation sessions in Regina on April 26, 2005 and in Saskatoon on April 27, 2005. The intense discussion resulted in draft system flow maps for breast and prostate cancer care, identification of problems areas, and a vision for improved access.

> *There was a very good mix of people and therefore a very good discussion. I really feel everyone here is committed to quality improvement.*
>
> *-Consultation participant*

Please take some time to review the document and flow charts and let us know if the charts provide an accurate and clear picture of prostate and breast cancer patient journeys.

The Cancer Consultation sessions were a critical first step in an ambitious project to improve access to care for breast and prostate cancer patients. The Health Quality Council and the Saskatchewan Cancer Agency undertook this work because our health system is complex, with many types of providers, transfers of service and information exchange. While each provider strives to improve care, it requires teamwork to identify opportunities for quality improvement and to optimize timely access by addressing the system as a whole.

Methods

Face-to-face meetings with a broad range of health professionals, patients, and community groups were utilized to gain an extensive understanding of the system of diagnosis and treatment of breast and prostate cancer patients.

Participants

We invited 58 professionals and 20 patients/advocates to the meetings in Saskatoon and Regina. Thirty professionals and 12 patients/advocates attended.

Participants self-selected into two groups: one to discuss breast cancer and the other to discuss prostate cancer. The prostate cancer groups consisted of several prostate cancer patients, a general practitioner, a representative of Saskatchewan Health, representatives from Regina and Saskatoon Health Regions, and the CEO and oncologists from the Saskatchewan Cancer Agency.

The breast cancer groups included nurses, radiologists, pathologists, oncologists, advocates, and representatives from the Saskatchewan Cancer Agency, family physicians, surgeons, a plastic surgeon, patients, representatives of the College of Nursing, Saskatchewan Health Breast Screening Program and Heartland Health Region.

Facilitators and recorders from the Health Quality Council and the Saskatchewan Cancer Agency led and documented the discussions. Main points were recorded on flip chart paper and a draft map was developed on wallpaper.

During the mornings we identified major steps from suspicion to diagnosis and beyond. For this exercise we aimed to create a map representing the experiences of at least 80 per cent of patients. During the afternoon we gathered information about rural/urban differences, estimated time intervals between steps, and began discussing opportunities for quality improvement.

We are in the process of consulting with stakeholders who were not represented at the consultation. They will be asked to review the flow maps and be invited to participate in the project.

Consultation Results

The draft maps of patient journeys through the health care system are presented below.

Breast Cancer

In 2005, the Saskatchewan Cancer Agency anticipates 620 new diagnoses of and 150 deaths from breast cancer. This does not begin to describe the amount of diagnostic work done in this area, however. In 2003 the Screening Program for Breast Cancer alone referred 2,627 women for further testing due to abnormal mammograms. Of these, slightly less than 7% turned out to be cancer.

The journey for breast cancer patients can be very lengthy and complex and is presented on the following pages. The journeys in bold from Diagrams 1-4, beginning on page eight, present four variations of the overall flow. Most of the discussion at the meetings was around diagnosis. Therefore, more detail is presented for this portion of the flow.

Screening and Diagnosis

Most women enter the system in two ways:

- regular screening mammography (50-69 years of age); or
- detecting a lump (by self or during routine examination by physician).

There is a smaller number of patients who are identified as high risk (e.g., very strong family history) who may be sent for genetic counseling and testing. They may also begin regular screening sooner. If these patients detect a lump or a suspicious lesion, they proceed through the system in the same way as other patients.

In general, women follow the path from a visit with a family physician → diagnostic imaging → biopsy. Surgical consultations may occur at various points in the path: after the family physician visit, after diagnostic imaging, or after an initial biopsy. Multiple intervening family physician visits may also occur following test results. At the Regina Breast Health Centre, diagnostic imaging and biopsies can take place at the same time. Diagrams 1a, 1b, 2a, 2b, 3, and 4 show overall pathways and Diagrams 5, 6, and 7 show detailed information about biopsy pathways to diagnosis.

Diagnostic imaging consists of diagnostic mammography with or without ultrasound. If required, ultrasound usually occurs on the same day, but may occur after mammography.

Table 1. Biopsies in breast cancer diagnosis

Biopsy type	Invasiveness	Sensitivity	Operator
Fine Needle Aspiration Biopsy (FNAB) (with or without ultrasound or mammographic guidance)	+	+	Radiologist or surgeon
Core Biopsy (with or without ultrasound or mammographic guidance)	++	++	Radiologist or surgeon
Excisional/Incisional/Open Biopsy (with or without wire localization)	+++	+++	Surgeon

Table 1 outlines the different types of biopsies available. In instances where a FNAB is performed but results are inconclusive or the lump is clinically suspicious, a core or open biopsy will follow. Pathology reports follow each biopsy.

In most instances, an open biopsy is performed as a separate procedure. If pathology is positive, definitive surgery is booked. In some cases, an open biopsy may be followed by quick section pathology while the patient is in the operating room, and if positive, the patient may immediately proceed to definitive surgery. This approach was the standard of care ten years ago, but in recent years other approaches have gained popularity.

Surgery Treatment Plan

When pathology reports a positive finding (malignant) women can undergo breast conserving surgery, mastectomy; or be referred directly for oncologist assessment. Such patients may not have further surgery, or may have their surgery deferred for a period of time.

Patients who undergo mastectomy may or may not have reconstructive surgery. If reconstructive surgery is part of the pathway, they may see a plastic surgeon and have reconstruction after the surgery. The mastectomy and reconstruction may also be coordinated and done simultaneously. Diagram 8 outlines the different sequences of flows involved in the surgery treatment plan.

Staging of cancer may include the following investigations: chest x-ray; abdominal ultrasound; bone scan; CT scan; MRI; and sentinel node biopsy. Staging occurs after the definitive diagnosis of cancer is made and before treatment. Some of the above tests may occur before or after surgery and before or after the first assessment by the oncologist. Time did not permit detailed mapping of the sequence and timing of these tests. This may be determined through follow-up data analyses and consultations.

Table 2. Estimated wait times from Saskatoon consultation

Appointment	Days
Screening Mammography	42
Family physician visit	7-21
Surgeon visit	10-14
Diagnostic imaging	7
Fine Needle Aspiration Biopsy	7-21
Core biopsy	3-7
Open biopsy	21-35
Pathology	7-10
Surgery	7-21
Reconstructive Surgery	21-37
Oncology (from surgery to oncology visit	70

Guidelines for Time Intervals:

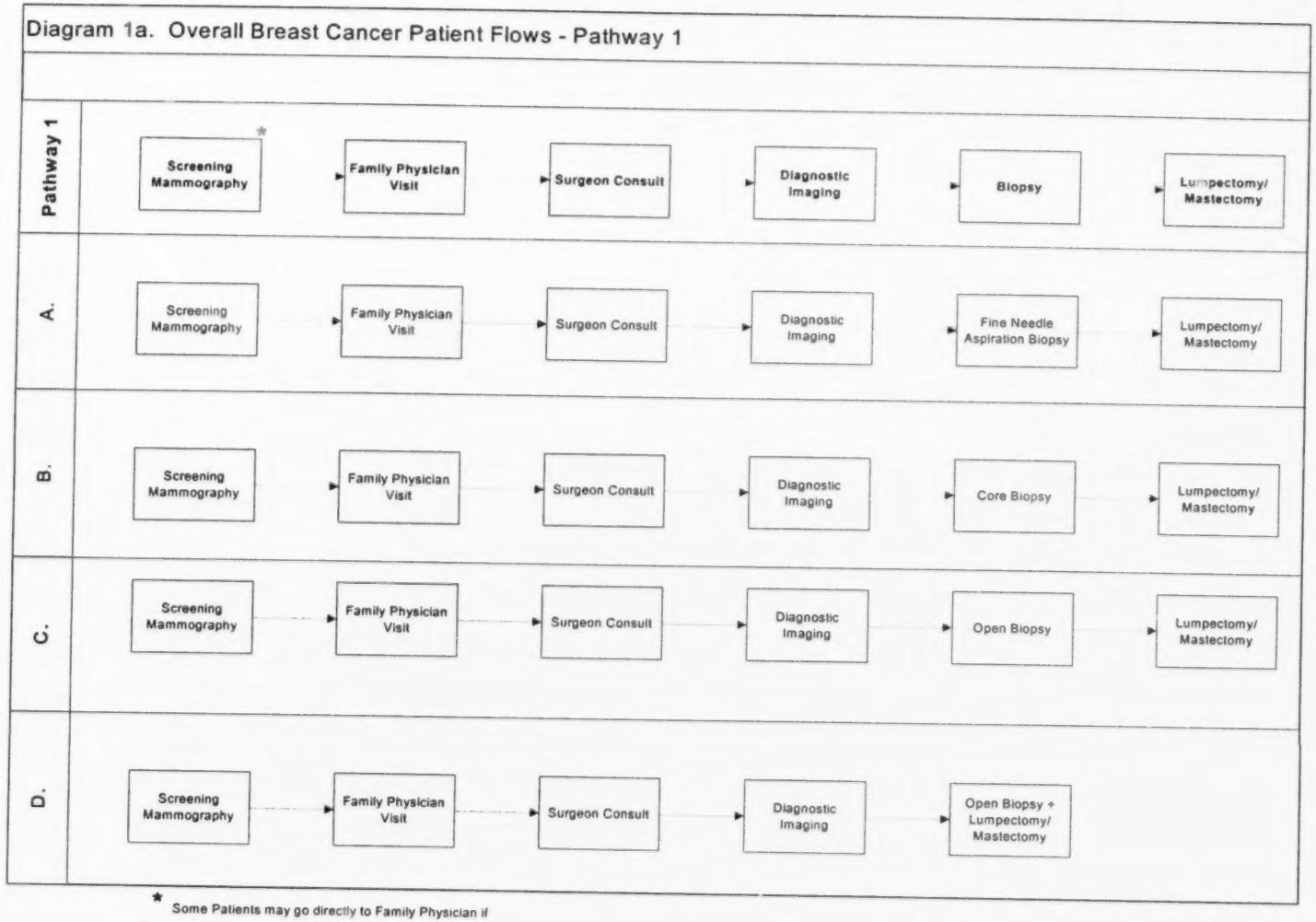
- According to the Canadian Strategy for Cancer Control: Diagnosis Working Group, the interval between physician visit to diagnosis should not exceed four weeks;
- According to the Canadian Society for Surgical Oncology the interval of diagnosis to surgery should not exceed two weeks;
- The goal for the Saskatchewan Cancer Agency from Surgery to treatment is 6 to 8 weeks;
- According to the Institute of Medicine time from abnormal mammography (category 4 or 5) to biopsy should not exceed 14 days; and,
- According to the Institute of Medicine, a needle biopsy should occur at least one day before surgery.

Breast Cancer Consultation Participant Recommendations:

- Have direct link from breast screening to diagnostic imaging and family physician;
- Reconsider when tests required by the Cancer Centres (e.g., bone scan, CT scan) are ordered;
- Determine the most appropriate/effective time to refer a patient to the Cancer Centres;
- Address disparities in experience and options of rural and urban patients; and,
- Develop a (nurse) navigator to assist women through the journey.

The next 11 pages illustrate the breast cancer care pathways identified at the consultation sessions

Diagram 1a. Overall Breast Cancer Patient Flows - Pathway 1



* Some Patients may go directly to Family Physician if they suspect lump or lump detected during routine physical exam

Diagram 1b. Overall Breast Cancer Patient Flows – Pathway 1 continued
Pathway 1
E.
Screening Mammography
Family Physician Visit
Surgeon Consult
Diagnostic Imaging
Fine Needle Aspiration Biopsy
Core Biopsy
Lumpectomy/ Mastectomy
F.
Screening Mammography
Family Physician Visit
Surgeon Consult
Diagnostic Imaging
Fine Needle Aspiration Biopsy
Open Biopsy
Lumpectomy/ Mastectomy
G.
Screening Mammography
Family Physician Visit
Surgeon Consult
Diagnostic Imaging
Fine Needle Aspiration Biopsy
Open Biopsy + Lumpectomy/ Mastectomy

Figure 2a. Overall Breast Cancer Patient Flows – Pathway 2

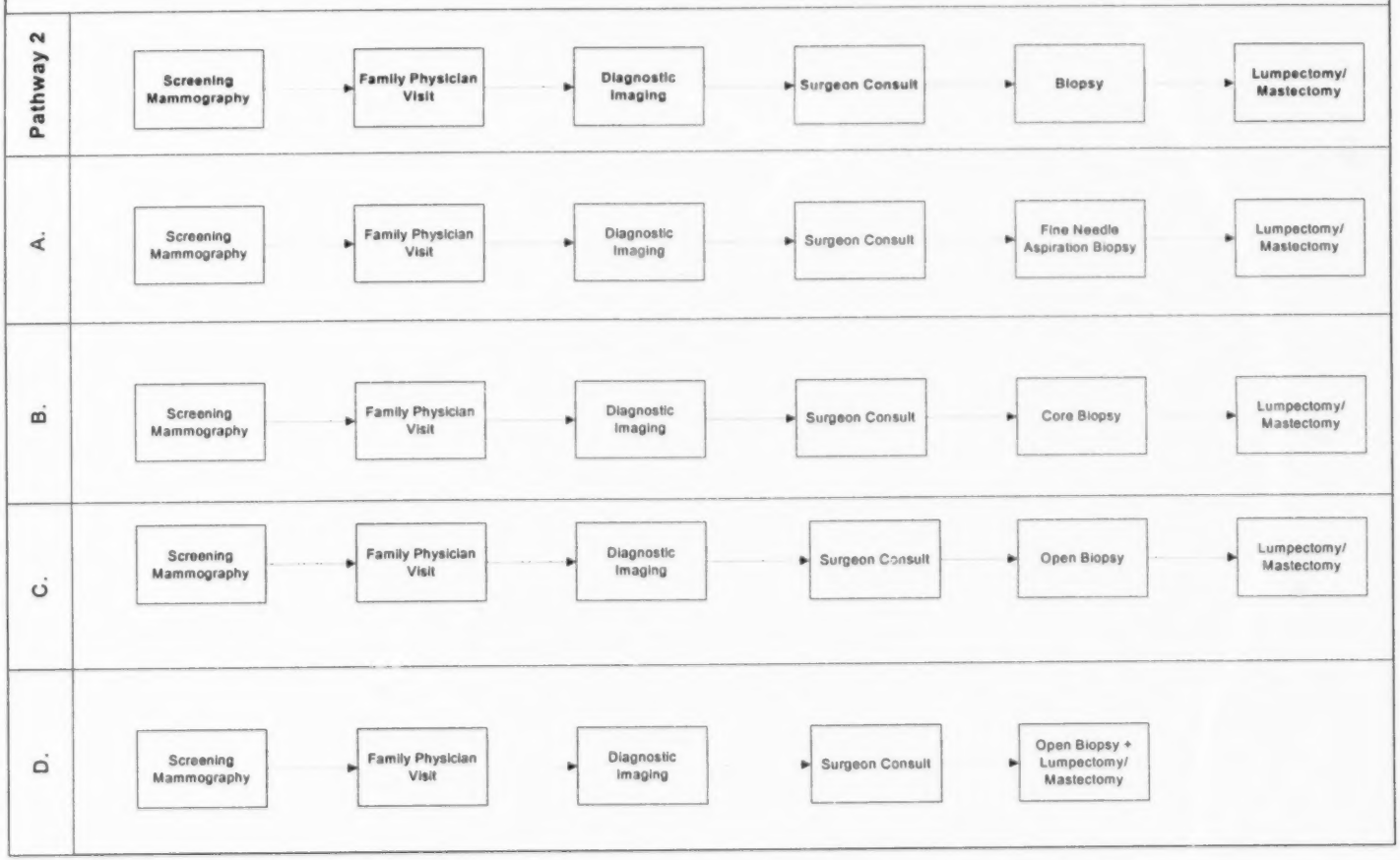


Figure 2b. Overall Breast Cancer Patient Flows – Pathway 2 continued

Figure 3. Overall Breast Cancer Patient Flows – Pathway 3

Figure 4. Breast Cancer Patient Flows – Pathway 4

Figure 5. Diagnostic Imaging
A
B
C
Diagnostic Mammography
Diagnostic Mammography and Breast Ultrasound
Diagnostic Mammography
Breast Ultrasound

Figure 6. Biopsy Paths 1 and 2

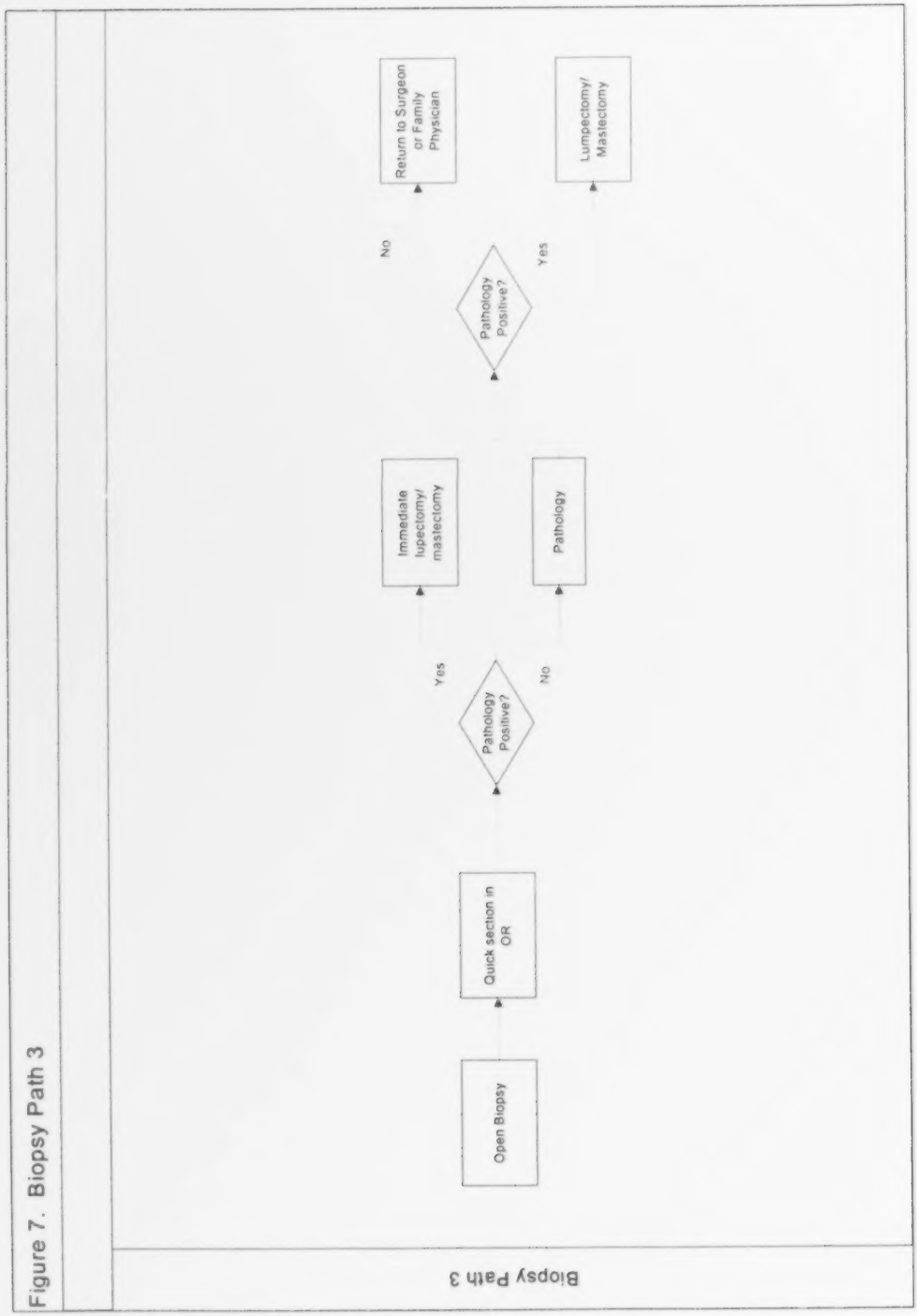


Figure 7. Biopsy Path 3

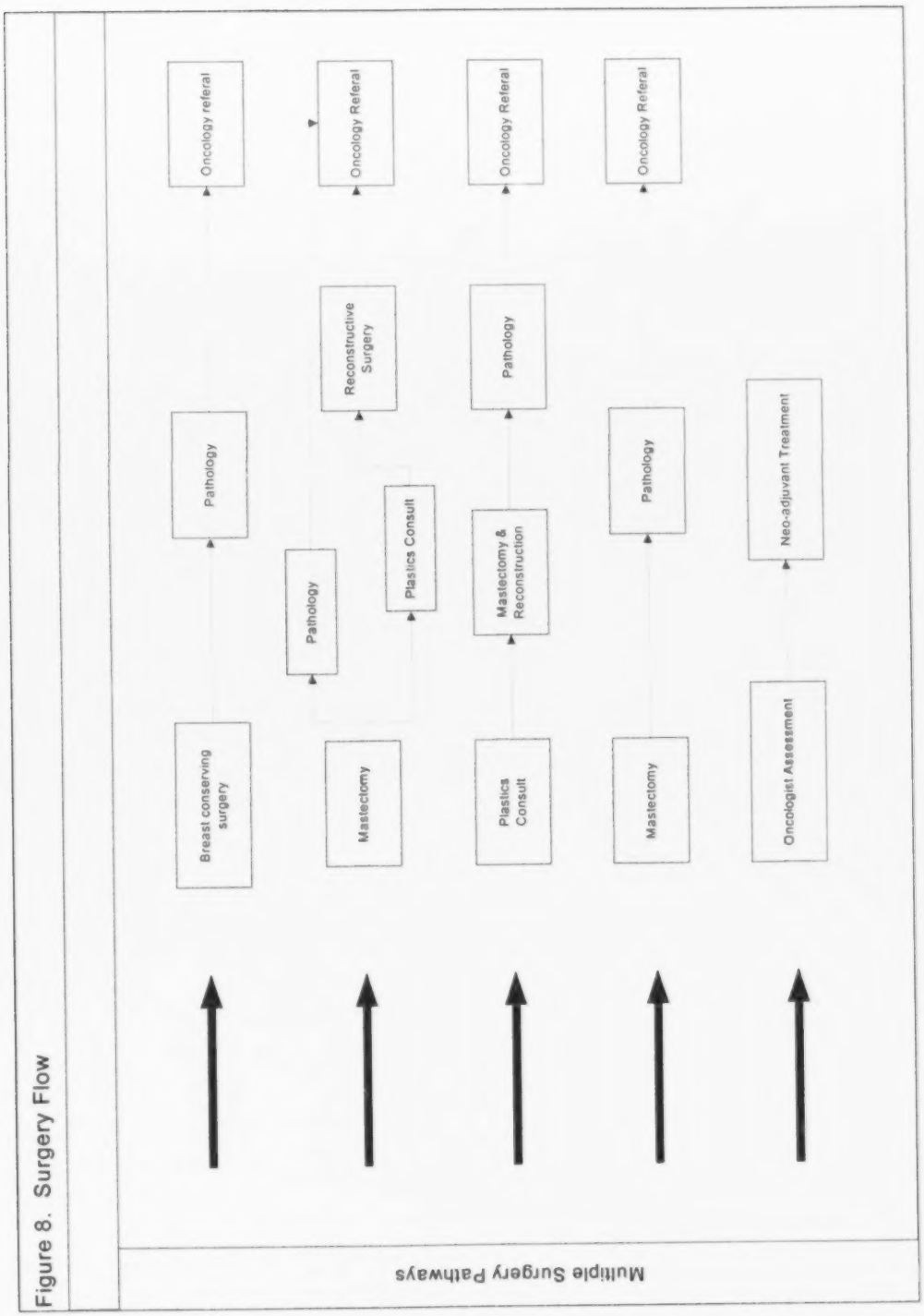


Figure 8. Surgery Flow

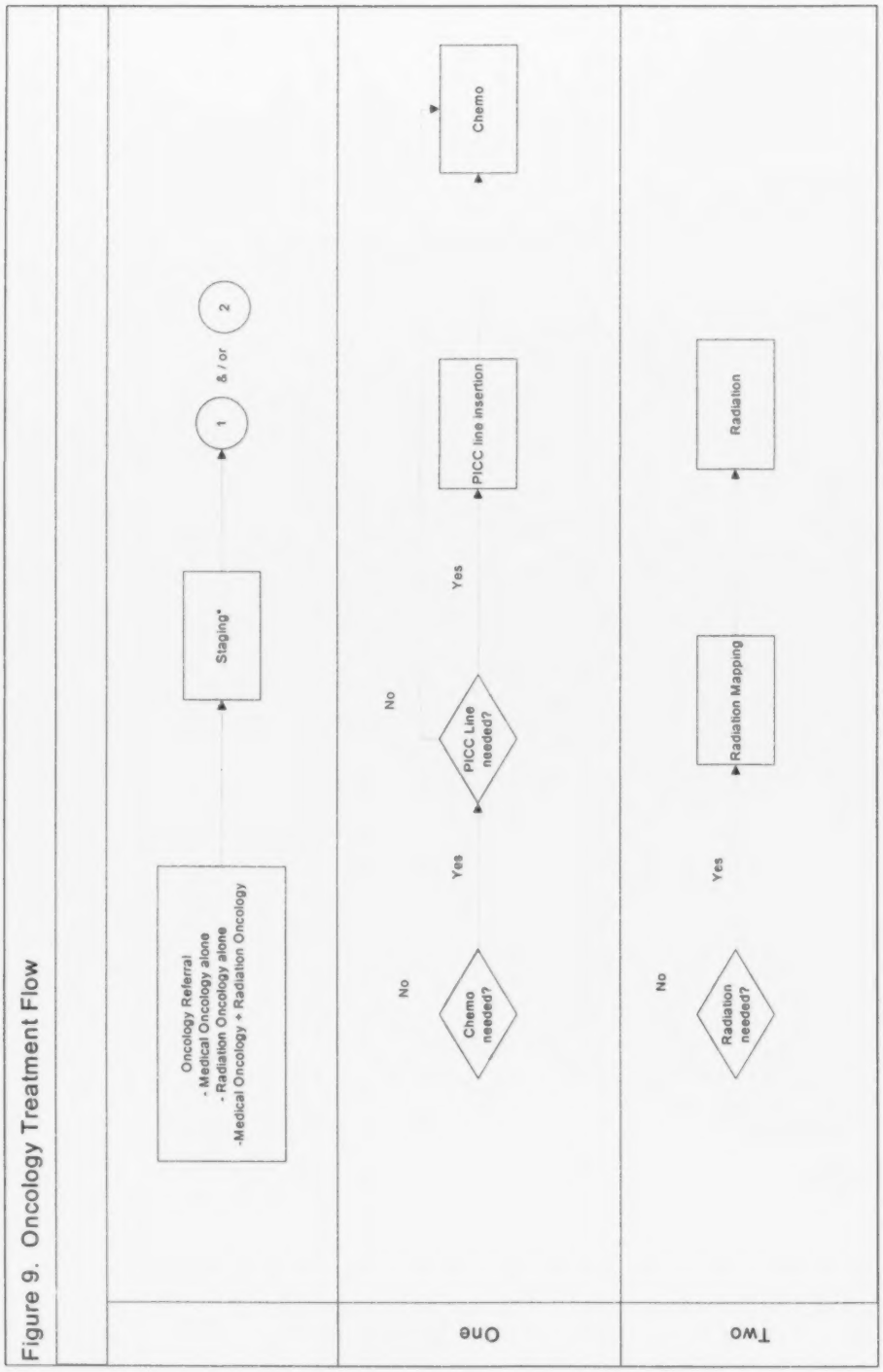


Figure 9. Oncology Treatment Flow
Oncology Referral
- Medical Oncology alone
- Radiation Oncology alone
-Medical Oncology + Radiation Oncology
Staging*
1
& / or
2
Chemo needed?
No
Yes
PICC Line needed?
No
Yes
PICC line insertion
Chemo
Radiation needed?
No
Yes
Radiation Mapping
Radiation
One
Two

Prostate Cancer

In 2005, the Saskatchewan Cancer Agency anticipates 840 new cases and 250 deaths from prostate cancer in Saskatchewan. The age standardized incidence is the second highest in Canada and the age standardized mortality rate is the highest. A unique aspect of prostate cancer care is the role of the urologist in treatment outside of the Cancer Centres. The PSA test, while very controversial, was not a focus of discussion.

Event	Activities
Family Physician Visit ↓	• Patients may present with or without symptoms. • Components of care: o Digital exam; o History of patient and family; o Education about PSA, prostate. • Variation – some patients start with a nurse practitioner
PSA Test ↓	• Blood is drawn at labs around the province and sent to labs in Regina or Saskatoon for analysis. Only the Regina lab does 'free' PSA test. • Results are available in 20 minutes to 10 days and are reported by fax or email. • The test is done at no cost to confirm a diagnosis of cancer. As a routine check the patient is supposed to pay. This rarely happens. • Regina lab does 6000 PSA tests a month.
Contact with Family Physician ↓	• If the PSA level is 'high' the physician may see the patient again in his/her office or call patient and refer directly to a Urologist • Components of care: • Discuss the test results. There are practice variations on interpretation; • Consider other medical indicators; • May prescribe drugs for symptoms. • Refer patient to Urologist for further testing and possible treatment. • Some Family Physicians e.g. in Regina may refer directly to the radiologist due to shortage of Urologists. Depends on comfort level of Family Physician & Regional Health Authority policies. • Patient may enter watchful waiting at this point.

...flow continues on next page

Event	Activities
Urologist ↓	• Components of care: o Examine patient; o Review options. • Refer to radiologist for biopsy. • Variation: Urologists occasionally may do a transperineal or transrectal biopsy themselves if prostate large. • Wait to see a Urologist is three to six months. Family practitioner may call or indicate urgency in referral letter to decrease the wait time.
Radiologist ↓	• Ultrasound guided biopsy is most common . • Wait time for Radiologist is unknown. • Variation: Patient may have a cystoscopy and biopsy, or TURP to debulk prostate for symptoms.
Pathology ↓	• Biopsy samples are sent by bus or courier to 8 pathology labs around the province. • The labs are cooperative and provide each other with second opinions and coverage for holidays. • Estimated report in one week online, two weeks by mail. • Provides definitive diagnosis of cancer. • Reports sent by email or fax to the referring physician, (usually the Urologist), the Radiologist and the Family Physician. • If the diagnosis is cancer, a report is sent to the SCA for registration, which is different than referral. • The radiologist does a quality check and may ask for another biopsy.
Urologist ↓	• Patient goes back to whomever ordered the test, usually the Urologist, to discuss diagnosis of cancer. • The next step is staging the cancer to determine if it has spread outside the capsule of the prostate. • Unusual or difficult cases are discussed with colleagues.

...flow continues on next page

<table>
<tr><th>Event</th><th>Activities</th></tr>
<tr><td>Nuclear Medicine
OR
Radiologist</td><td>For Bone Scan
• Wait 10-20 wk

For CT Scan
• Wait over 10 wk

Report 1 day – 1 wk.
Can listen to dictation.

<table>
<tr><th></th><th>Symptoms</th><th>No Symptoms</th></tr>
<tr><td>High grade</td><td>Bone Scan and CT</td><td>Bone Scan and CT</td></tr>
<tr><td>Low grade</td><td>Bone Scan</td><td>No test</td></tr>
</table>
• MR could be done but too long a wait
• PET CT is new and expensive option</td></tr>
<tr><td>Urologist</td><td>• Discussion of treatment options including consequences, side effects, success rate and wait times.
• Treatment options given by the Urologist include:
◦ Surgery, either radical or laparoscopic prostatectomy;
◦ Hormonal therapy (pill or injection). It is a unique situation that Urologists can prescribe drugs for cancer treatment; SCA pays for the drugs;
◦ Orchidectomy (usually later on);
◦ Watchful waiting.
• 75% of treatments will be of curative intent.</td></tr>
<tr><td>Oncologist</td><td>• 40% of patients are referred to an oncologist at one of the two Cancer Centres for the following treatments:
◦ External beam radiation (curative or palliative);
◦ Hormonal therapy;
◦ Chemotherapy for hormonal resistant disease;
◦ Watchful waiting.</td></tr>
<tr><td>Out of Province Oncologist</td><td>• Brachytherapy – treatment paid for by Sask Health if prior approval.
• Cryotherapy – treatment not paid for.</td></tr>
</table>

Vision for a Prostate Centre

- Diagnostic tools in one facility
- Space for family physicians, surgeons, medical imaging and oncologists to practice
- Advocate or navigator
- Linked to the system rather than a Centre (some functions will be 'virtual')
- Electronic links to regional and rural patients
- Not exclusively for cancer
- Information on all points of care
- Reduced waiting times
- In-province brachytherapy
- Virtual services and web based information
- Information and education room

The next two pages illustrate the prostate cancer care pathways identified at the consultation sessions

Figure 10. Prostate Cancer Flow Chart

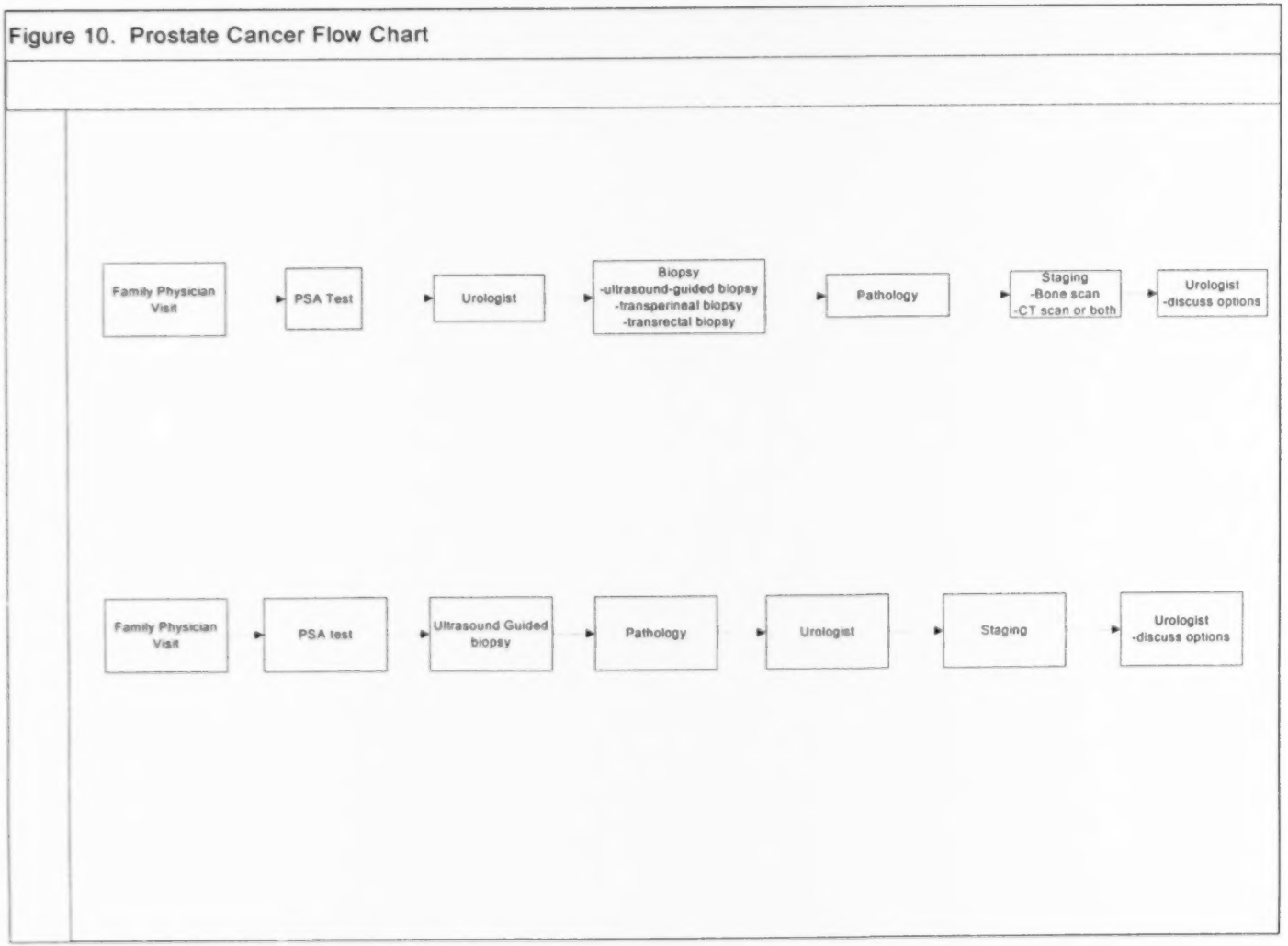
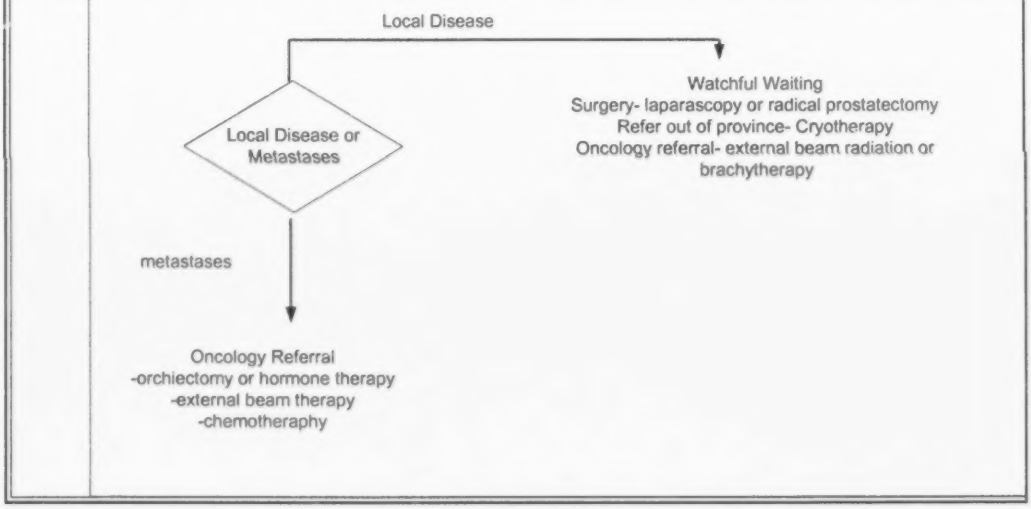


Figure 11. Prostate Patient Flow – Treatment Options



General Discussion and Vision

The following suggestions were generated from the consultations. Suggestions from breast and prostate groups have been combined because they were similar. These suggestions are not presented in order of importance and have not been assessed for validity.

> *Improvement is possible and necessary.*
> *-Consultation participant*

Redesign Patient Flow

Quality Improvement efforts will identify opportunities to redesign patient flow to improve timely access to care. According to Operations Research, greater efficiency can be achieved by identifying activities that can be carried out in parallel. At this time, it appears few processes occur in parallel. Each step must occur before the next step is initiated. For instance, an issue raised in Regina and Saskatoon was delay from breast screening to diagnostic imaging, for a woman with an abnormal screen. What usually happens now is the patient receives a letter indicating she should see her family physician. She then makes an appointment and waits for this appointment. The physician then refers her to diagnostic imaging for a mammography and/or an ultrasound where she again waits for her appointment.

Consultation participants suggested having Breast Screening Centres make the appointments for diagnostic imaging and with the family physician when a suspicious screen occurs. If this is indeed an improvement that is chosen for implementation, a team with expertise in all of the relevant areas will be devised and implementation planning will begin. For more details about teams please see page 26.

Need for Resources:

- Resources needed include diagnostic equipment, space, planning time, and specialists.

Coordination:

- We need to move toward a service model with multidisciplinary teams;
- There should be electronic access to patient data province-wide to facilitate tracking and avoid duplication. However, there may be privacy issues to resolve.
    - All family practitioners should have access to the Internet.
    - Due to technical issues Royal University Hospital does not send diagnostic imaging reports to family physicians.
- Create a navigator or advocate and simplify the steps involved in diagnosis and treatment. Flow should be more consistent across jurisdictions;
- Address jurisdictional tensions and barriers;
- Health professionals may be aware of particular aspects of the cancer care system but may not have knowledge of the entire process. We should aim to increase awareness of the entire cancer care picture among health professionals.

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Standards:

- The queue for testing needs to be managed (e.g., triage);
- Have standards, and quality improvement practices that we can measure over time and compare to other provinces.

Information and Education:

- Develop a comprehensive education and resource centre for patients and providers. Patients need to know credible sources for self-education;
- Patients are not always presented with all options. There needs to be a process to protect patients from only hearing practitioner's preferences;
- Continuing education is needed for medical professionals on guideline updates, test updates and how to navigate through the system.

Wait Times:

- We need to measure time intervals in order to manage them;
- Longer waits should trigger review and action;
- Eliminate wait list, particularly up to definitive diagnosis. Define 'reasonable' wait times.

Other:

- Need to be patient centered not disease centered;
- Need to consider that the system for diagnostics is a blend of public and private;
- Need to develop expertise in scheduling.

Future directions of this project

The Health Quality Council and Saskatchewan Cancer Agency will work with partners to address quality issues for breast cancer care in the immediate future, moving onto prostate care when time and resources allow.

Three types of involvement in this project have been established: a Quality Improvement Steering Committee, QI Teams and a Technical Committee. Many have volunteered to participate in each team and we welcome others to volunteer.

The Quality Improvement Steering Committee will provide strategic direction, act as a champion for breast cancer care quality improvement initiative throughout the province, provide direction to QI Teams, and assist QI Teams spread effective strategies to the province. QI Teams will develop and implement improvement strategies at a local level. Technical Committee members will be contacted as their particular expertise is required. This group will review data and provide guidance to the Operations Research component of the project.

Next Steps for the Health Quality Council

- We are analyzing administrative data to determine actual time intervals between steps in the flow of patients through the system, to monitor changes in the time intervals over time, and to identify variations in time intervals due to demographics or geography.
- Indicators of quality intervals will be developed for different pathways as there is more than one appropriate pathway along which patients can travel.
- Our optimistic hope is that we can begin our improvement work in the fall of 2005.
- We are reviewing the 'best practices' literature to identify strategies from other jurisdictions that may be relevant to our improvement efforts.

Conclusion

With your help we have developed draft flow diagrams and we continue to seek input from those who were unable to attend the consultation sessions.

We are committed to working with our partners to improve the quality of care cancer patients receive in our province.

Lastly, we would like to express a sincere thank you to those who participated in and provided guidance at the consultations. We look forward to working with you in the future to enhance accessibility to high quality care for breast and prostate patients in Saskatchewan.

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